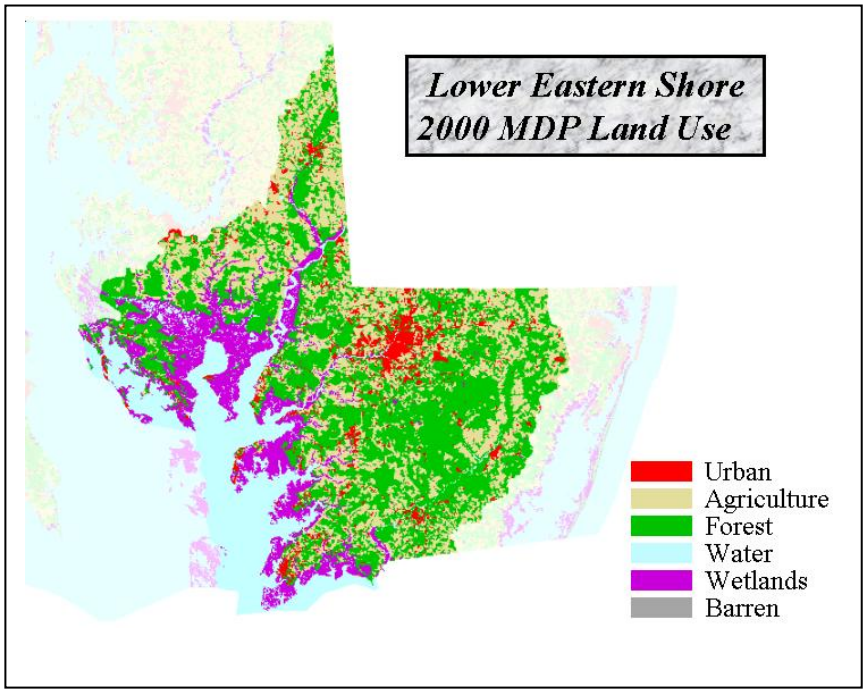
Lower Eastern Shore Basin Summary

Executive Summary
1985-2003 data, January 2005

The Lower Eastern Shore Basin is predominantly forested (61 percent) followed by agriculture (32 percent). Agricultural lands contribute most of the nitrogen and phosphorus (about 60 percent) and sediments (70 percent). Although a few improving trends are seen in phosphorus and algae levels, in some areas algae and dissolved oxygen levels are worsening. Water clarity is worsening at the downstream stations and poor water clarity is widespread. Bay grasses have improved in a few areas, but do not meet the goals anywhere.

LOADINGS (based on watershed model)



Modeled nitrogen, phosphorus, and sediment loadings decreased from 1985 to 2002. Agriculture remains the dominant source, but point sources have become more important as a source of nitrogen (now 12 percent).

- Total nitrogen loadings have decreased by about a quarter from 1985 to 2002 (down from 9.46 to 6.95 million pounds).
- Total phosphorus loadings have decreased by half between 1985 and 2002 (down from 1.1 to 5.5 million pounds).
- Sediment loadings have declined by a third from 1985 to 2002 (down from 94,000 tons to 64,000 tons).

LONG-TERM TIDAL WATER QUALITY (based on monitoring concentration data)

Only scattered improving trends in water quality are seen in the Lower Eastern Shore, and many areas remain in poor condition, especially with respect to suspended solids and water clarity.

- Nitrogen levels are worsening at the Sharpstown station (Nanticoke) and no improving trends are seen throughout.
- Although a few improving trends are seen in phosphorus and algae levels, in some areas algae levels are worsening.
- Suspended solids levels and water clarity are poor in most areas, and water clarity is worsening at the downstream stations.

- Although dissolved oxygen is good to fair, it is worsening in the upper Nanticoke (Sharpstown) and at the Manokin station.

BIOLOGICAL and ECOSYSTEM MONITORING

Bay grasses and biological communities are all in poor condition.

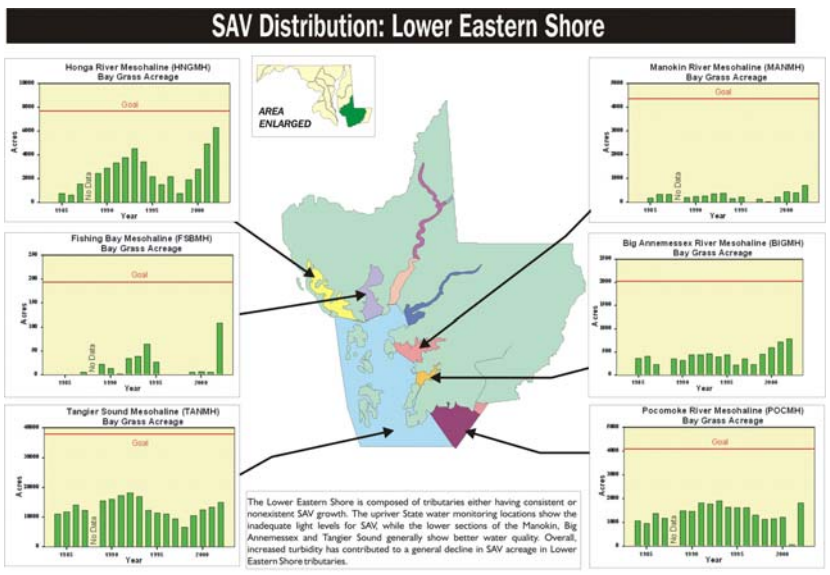


Figure 1a: SAV coverage on the Lower Eastern Shore, 1984 to 2002

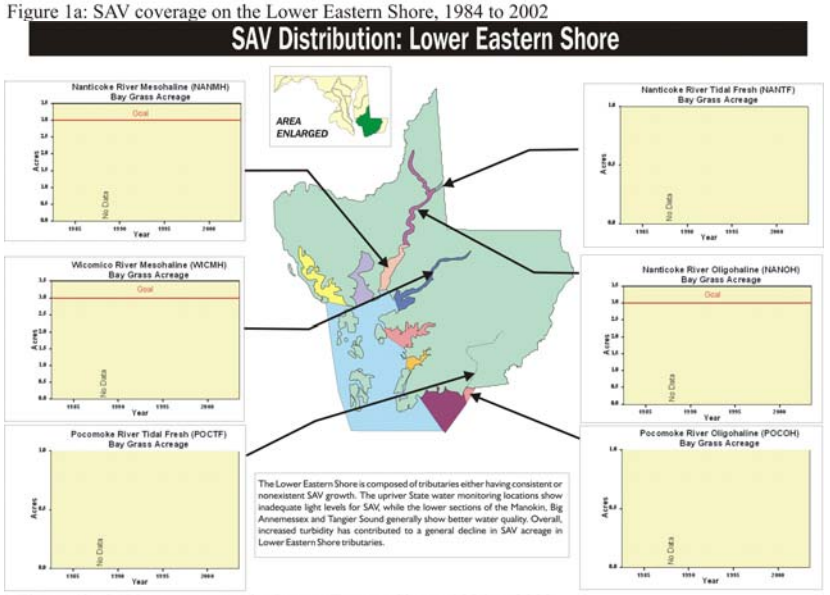


Figure 1b: SAV coverage on the Lower Eastern Shore, 1984 to 2002

- Bay grass beds in the Honga River and Fishing Bay have improved, but do not yet meet the goal. Other areas have been variable or have no grass, and remain well below the bay grass goals.
- Overall, benthic community was good in the Fishing Bay, the mesohaline section of the Nanticoke, the Manokin, and the Big Annemessex. Conditions were intermediate to degraded in Tangier and Pocomoke Sound, upper areas of the Nanticoke, and the Wicomico and Pocomoke Rivers.
- No recent data are available for the zooplankton community due to budget cuts.
- The Nanticoke and Wicomico show quite a bit of phosphorus limitation in the spring summer and fall. The Manokin, Big Annemessex, Fishing Bay, and Tangier and Pocomoke Sound show more nitrogen limitation. The Pocomoke River, which is a blackwater system, is nutrient saturated or light-limited year-round.

For more detailed information see the complete basin summary at: http://www.dnr.state.md.us/bay/tribstrat/basin_summaries.html.